

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of

Amendment of Part 15 regarding new requirements)
and measurement guidelines for Access Broadband) ET Docket No. 04-37
over Power Line systems)

To: The Commission

Comments of Eric R. Ward
N0HHS Amateur Radio Operator

I, Eric R. Ward, an amateur radio operator granted call sign N0HHS, hereby respectfully submit my comments in response to the *Notice of Proposed Rulemaking* 04-29 (the Notice) in the above-captioned docket. The Notice requests comments on the establishment of requirements and measurement guidelines for Access Broadband over Power Line (BPL) systems. These comments generally address the economic feasibility of Access BPL bringing service to remote rural customers. In addition, these comments address specific questions raised in the Notice, and also suggest additional guidelines, enforcement measures, and disclosures to potential Access BPL customers. These comments are timely filed. For my comments, I state as follows.

Introduction—The Economic Reality of Access BPL

Access BPL systems offer the potential to provide broadband to anyone on an existing AC power grid. However, providers of Access BPL will be subject to the same economics as are providers of Broadband over DSL phone line or Broadband over cable TV. The BPL signal travels only a short distance without repeater (relay) equipment, which typically must be installed on the transmitting power line every ½ mile or less.

Thus, the kind of capital investment required to put Access BPL in place is no different than that required for phone line based-DSL or cable TV broadband. Individual rural users spaced at large distances will simply not furnish the service provider with sufficient economic return to justify the fixed cost of installing the necessary equipment.

Given this hard, market-driven fact, the Commission's promoting or even enabling Access BPL as a preferred solution for rural households in need of broadband access is at best specious, and at worst disingenuous.

Rules for Mitigating Interference to Licensed Services

The potential for harmful interference to and from BPL by other licensed wireless services, particularly the amateur service, merits special enforcement and disclosure rules. Such rules should include:

- 1) The proposed publicly accessible database must be kept current. If the Access BPL service providers themselves were responsible for maintaining a database about their own system, such databases would be useful not only to operators of licensed services seeking to mitigate interference, but also to the Access BPL service provider, as a tool for communicating the real-time status of its system to its customers. Requiring BPL service providers to maintain their own databases will couple accountability to customers with accountability to licensed operators and the Commission, in its role as the enforcing regulatory authority.
- 2) Access BPL equipment in the field (repeaters, injectors, extractors, etc.) should be clearly labeled with the name of the service provider and a toll free telephone number for interference complaint resolution. Such markings should

be obviously visible and readable with the naked eye from ground level. Such identification would allow the operator of a licensed service who is experiencing interference to easily identify the service provider contact information if interference can be localized by tracking its source with a receiver.

- 3) Mitigation by “notching” or inactivating equipment at specific locations must be implemented on an immediate, on-going basis, 24 hours per day. If the operator of the BPL system intends to mitigate interference by “notching” a specific frequency in response to an interference complaint, the bandwidth of the “notch” will dictate how often the operator must be prepared to respond to complaints. Moreover, licensed stations often operate intermittently on multiple bands, providing further reason that whatever BPL interference mitigation system is put in place must be able to immediately and dynamically alter the frequencies being radiated by the system.
- 4) Because mitigation by “notching” or inactivating equipment at specific locations will be impractical as a method of mitigating interference with mobile amateur stations, a radiated emission limit low enough to protect mobile stations must be established. Otherwise, BPL will clearly be unable to operate in compliance with Part 15 rules. Resolving interference complaints with mobile stations will be all but impossible, so radiation limits must be strictly set.
- 5) Testing and certification of compliance of emission within established radiation limits must be performed by an independent laboratory after

installation of new BPL systems and prior to initiation of service. BPL providers must be subjected to regular FCC-imposed audits of such independent tests.

- 6) Potential Access BPL customers should be fully informed of the regulatory environment within which this service would operate. As such, a service provider should be required to present a written disclosure to a potential customer explaining in plain language that Access BPL is an unregulated service that may be subject to interference by a licensed service. Moreover, the potential customer should be required to certify, by signature, that he/she understands the Part 15-mandated limitations under which the service will operate. Such disclosure should be required not only to inform the consumer, but also to protect the rights of amateur radio operators and users of other licensed services, whose rights with respect to interference with unlicensed services are generally not understood.
- 7) Severe penalties for non-compliance with any rules that pertain to Access BPL must be implemented and enforced against the service provider. In the absence of such enforcement, Part 15 will be made a sham.

Conclusion—Access BPL Does Not Fit the Commission’s Description of “Fully Evolved Broadband”

The FCC has a stated goal to provide a regulatory environment that promotes development of broadband access to as much of the US population as possible. However, Access BPL in no way automatically facilitates achieving that goal. Access BPL is subject to similar economics as existing wire line technologies,

requiring new capital investment proportional to the distance traveled by the signal (in this case, repeaters placed on power lines at regular intervals, typically every ½ mile or less). As such, Access BPL in no way “virtually eliminate[s] geographic distance as an obstacle to acquiring information” (from the description of “fully evolved broadband,” on the FCC’s broadband web page, <http://www.fcc.gov/broadband/>).

Only wireless broadband technologies, for which infrastructure costs do not scale proportionally with distance traveled by the signal, can claim a real likelihood of improving access for far-flung rural potential customers. The Commission will not be acting in the public interest by enabling the implementation of Access BPL—a forced-fit technology that offers no advantages over existing wire-based systems—and then putting its energies into resolving disputes over interference from that system. A far better use of Commission resources is to continue to create a regulatory environment that actively promotes the development of broadband over wireless technologies, which truly promise cost-effective broadband access for everyone in the US.

Respectfully submitted,

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